US 20080189291A1

(19) **United States**

(12) **Patent Application Publication**

(10) **Pub. No.: US 2008/0189291 A1**

(43) **Pub. Date: Aug. 7, 2008**

Hsu

(54) **SYSTEM FOR MEASURING AND DISPLAYING VITAL SIGNS AND METHOD THEREFOR**

(76) Inventor: **Kent T.J. Hsu**, Taipei (TW)

Correspondence Address:
TROXELL LAW OFFICE PLLC
SUITE 1404, 5205 LEESBURG PIKE
FALLS CHURCH, VA 22041

(21) Appl. No.: **11/700,960**

(22) Filed: **Feb. 1, 2007**

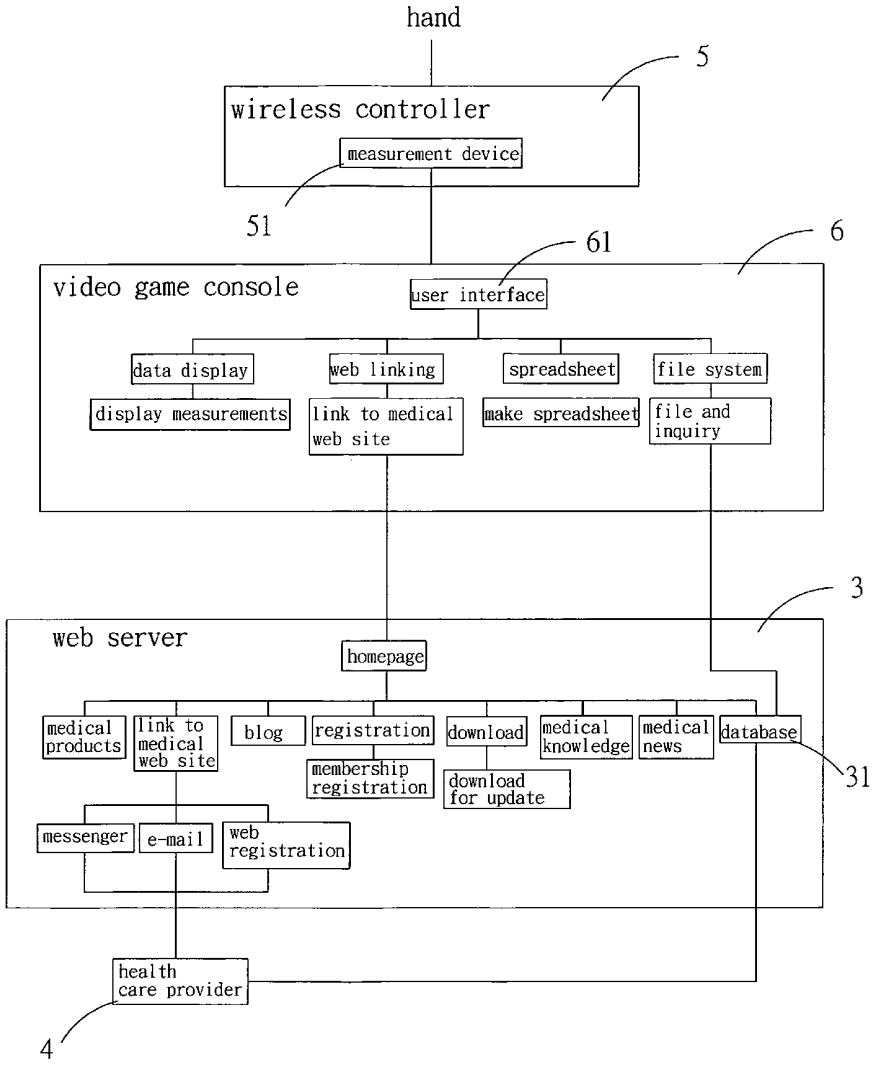
Publication Classification

(51) **Int. Cl.**
G06F 7/00 (2006.01)
A61B 5/00 (2006.01)

(52) **U.S. Cl.** **707/10**; 600/301

(57) **ABSTRACT**

A system and method for measuring and displaying vital signs are provided. A band is wrapped around the wrist of a person. The band includes a first measurement device for measuring blood pressure of the person. A device electrically connected to the band includes a second measurement device for measuring body temperature, pulse, and total calories of the person by contacting. Data about the measurements is sent to a user interface embedded in the device prior to sending to a display associated with the device for showing. The user interface is adapted to process data about the measurements in a spreadsheet, process data about the measurements into files to be stored in a database of a web server, and link to a health care provider via the database. The device is implemented as a computer and a mouse, a video game console and a wireless controller, or a mobile phone.



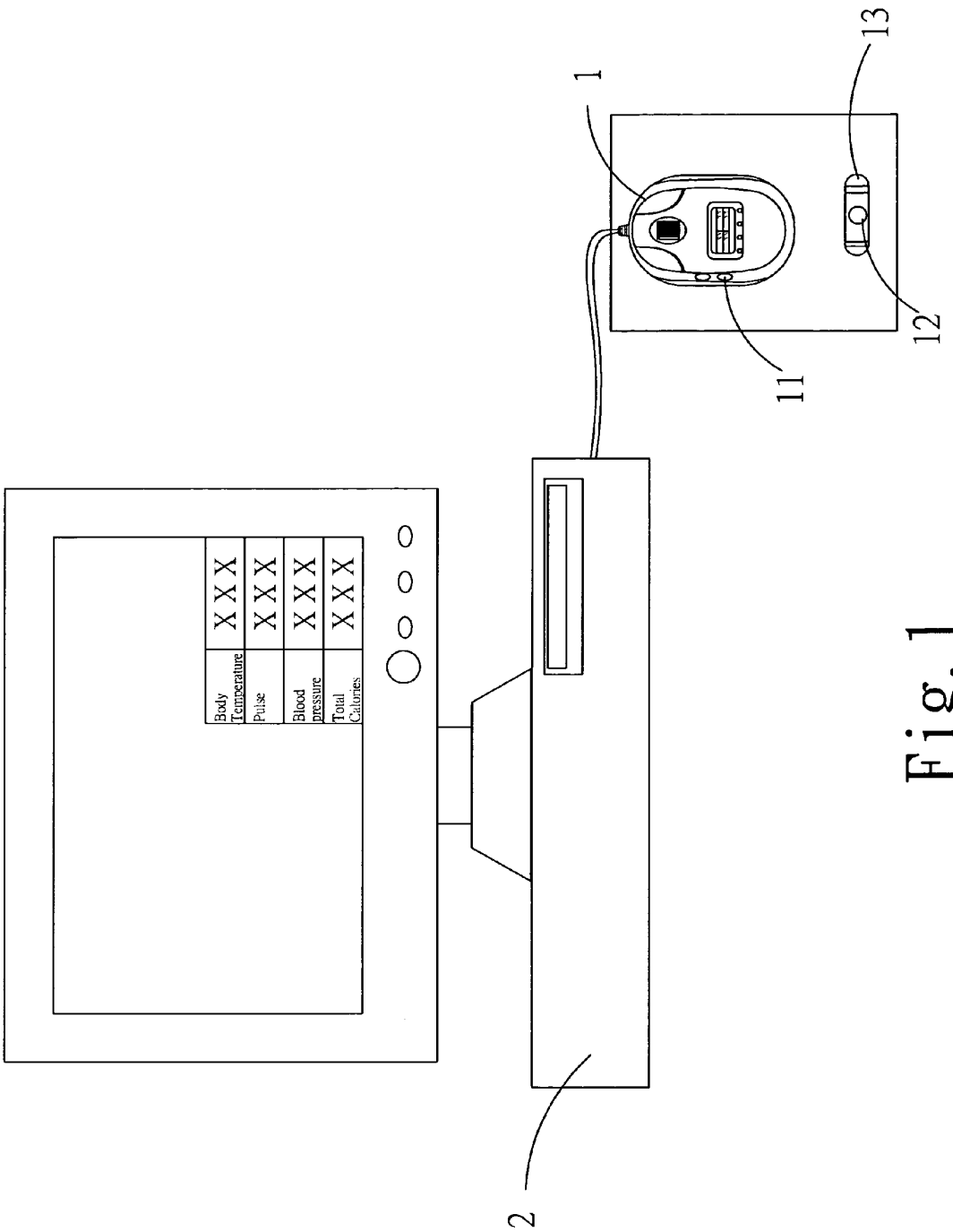

1
13
12
11
2
Body Temperature
Pulse
Blood pressure
Total Calories
XXX
XXX
XXX
XXX

Fig. 1

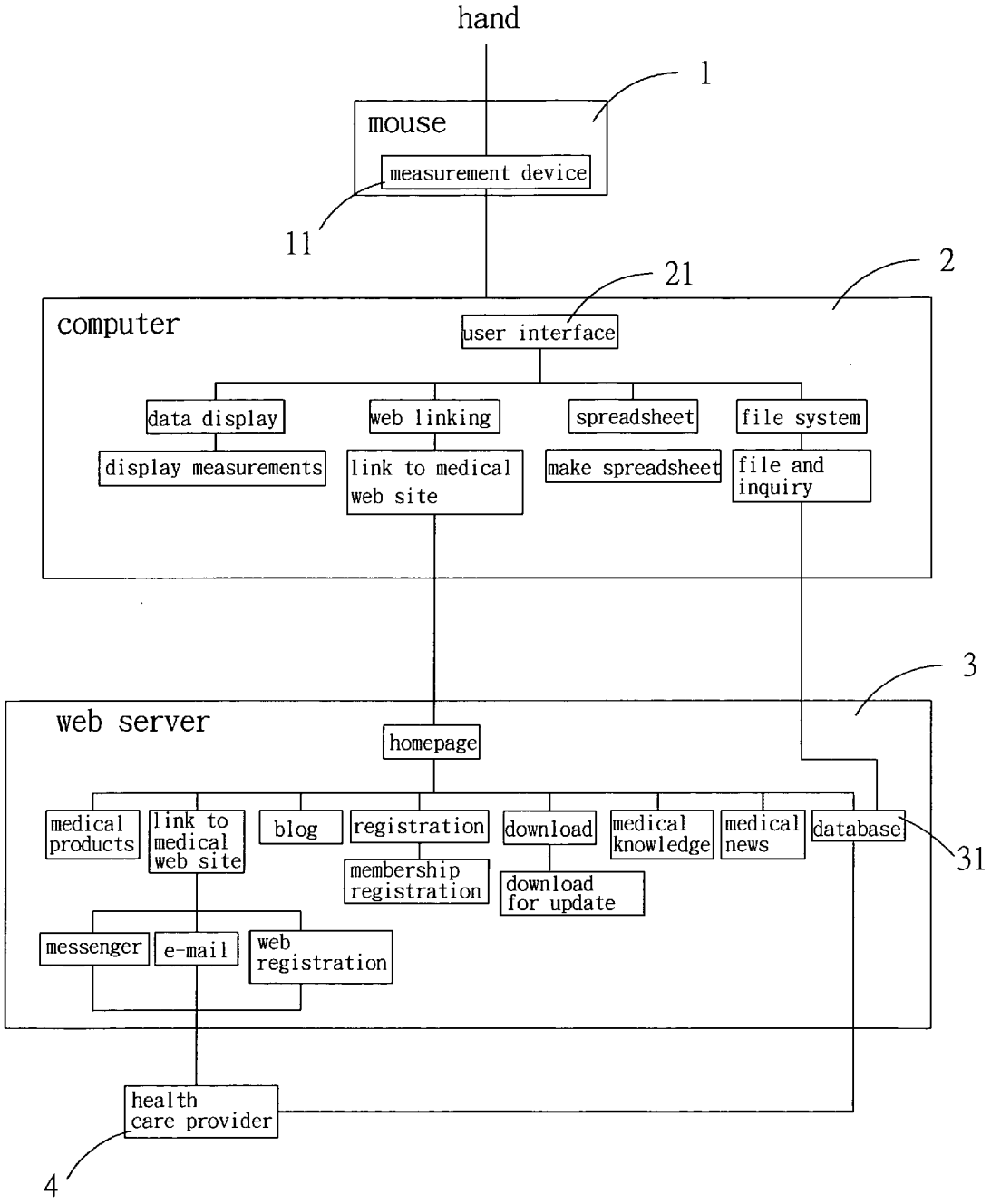

hand
1
mouse
measurement device
11
21
2
computer
user interface
data display
web linking
spreadsheet
file system
display measurements
link to medical web site
make spreadsheet
file and inquiry
3
web server
homepage
medical products
link to medical web site
blog
registration
download
medical knowledge
medical news
database
31
membership registration
download for update
messenger
e-mail
web registration
health care provider
4

Fig. 2

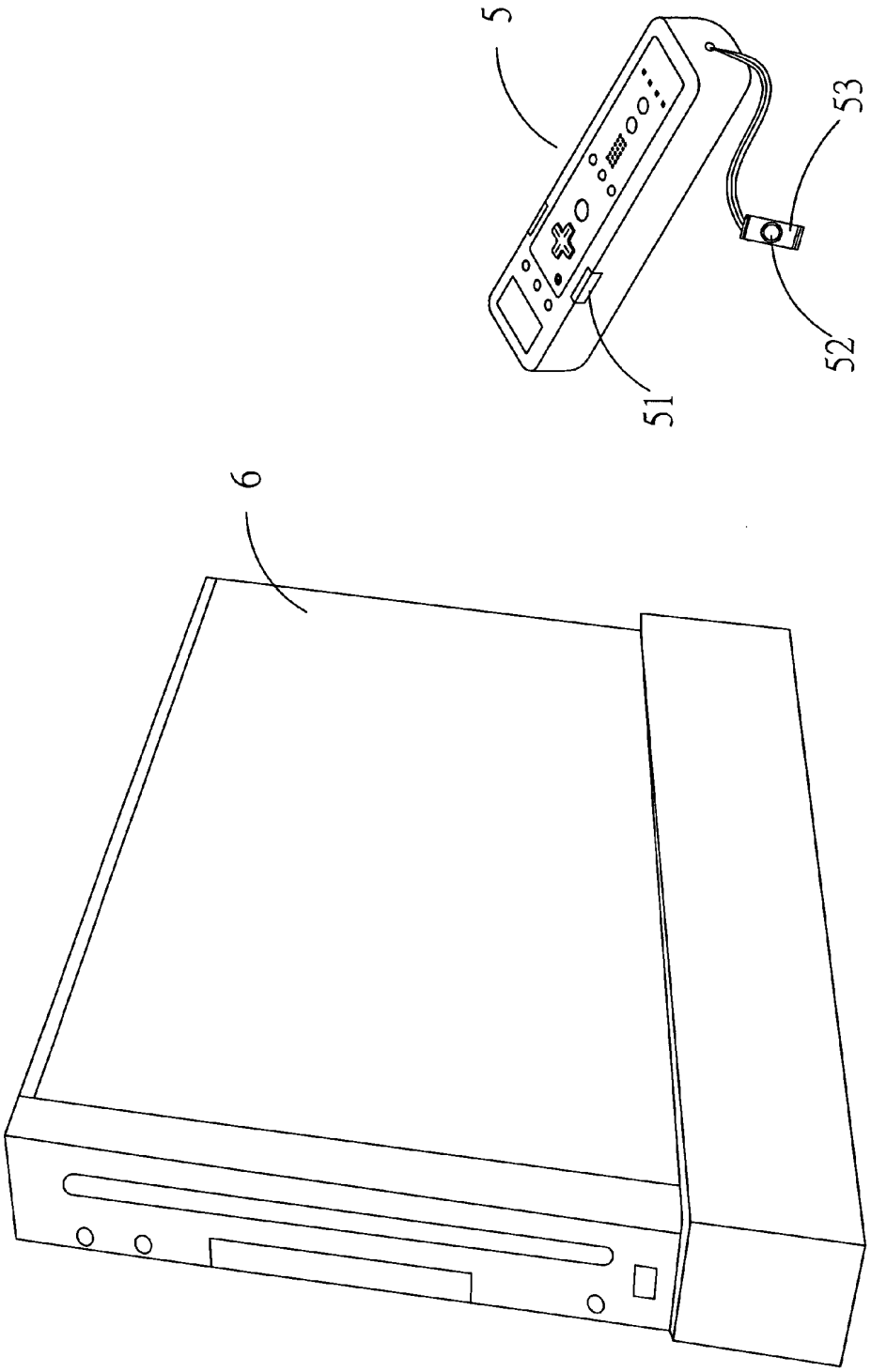


Fig. 3

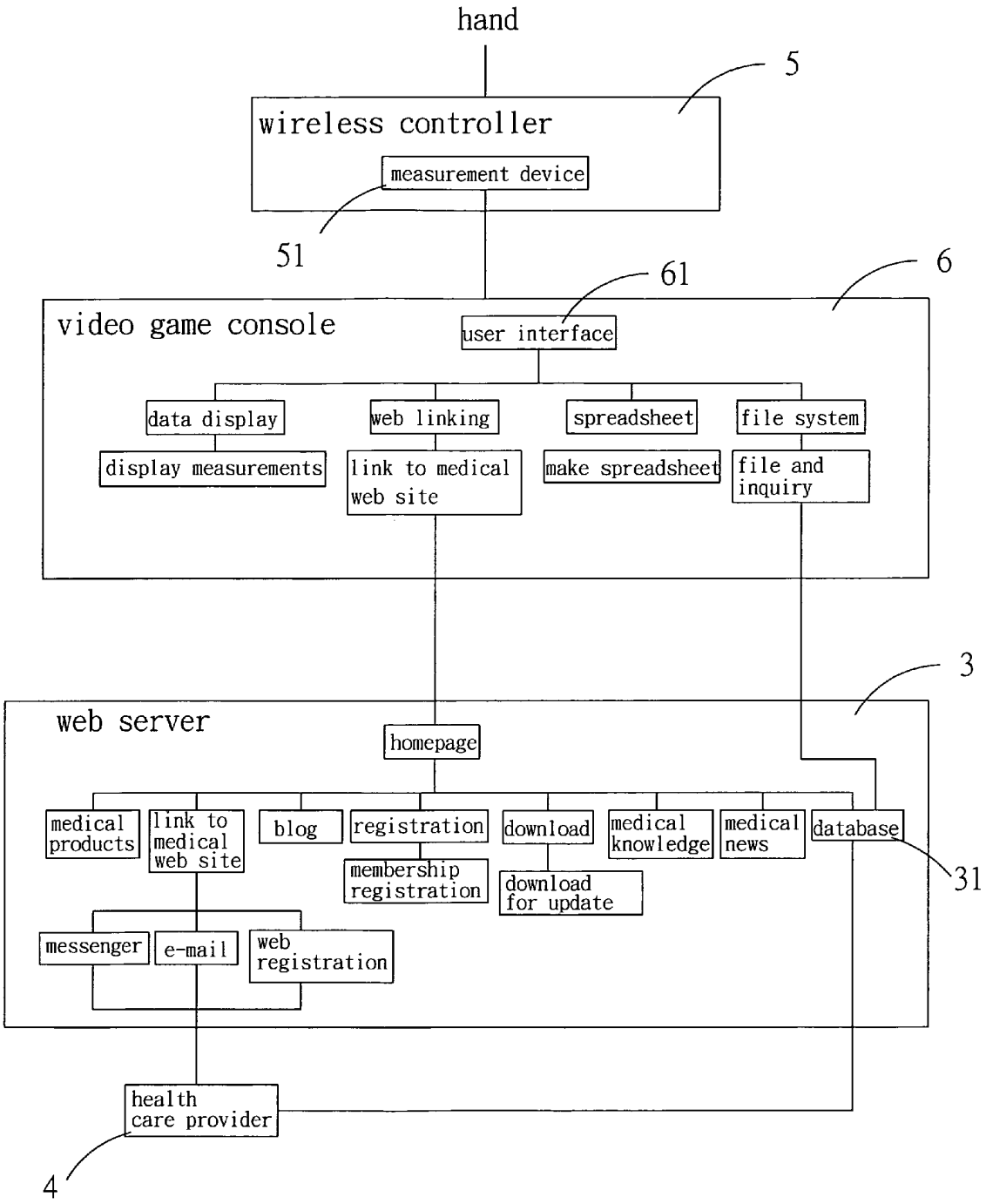

hand
5
wireless controller
measurement device
51
61
6
video game console
user interface
data display
web linking
spreadsheet
file system
display measurements
link to medical web site
make spreadsheet
file and inquiry
3
web server
homepage
medical products
link to medical web site
blog
registration
download
medical knowledge
medical news
database
membership registration
download for update
31
messenger
e-mail
web registration
health care provider
4

Fig. 4

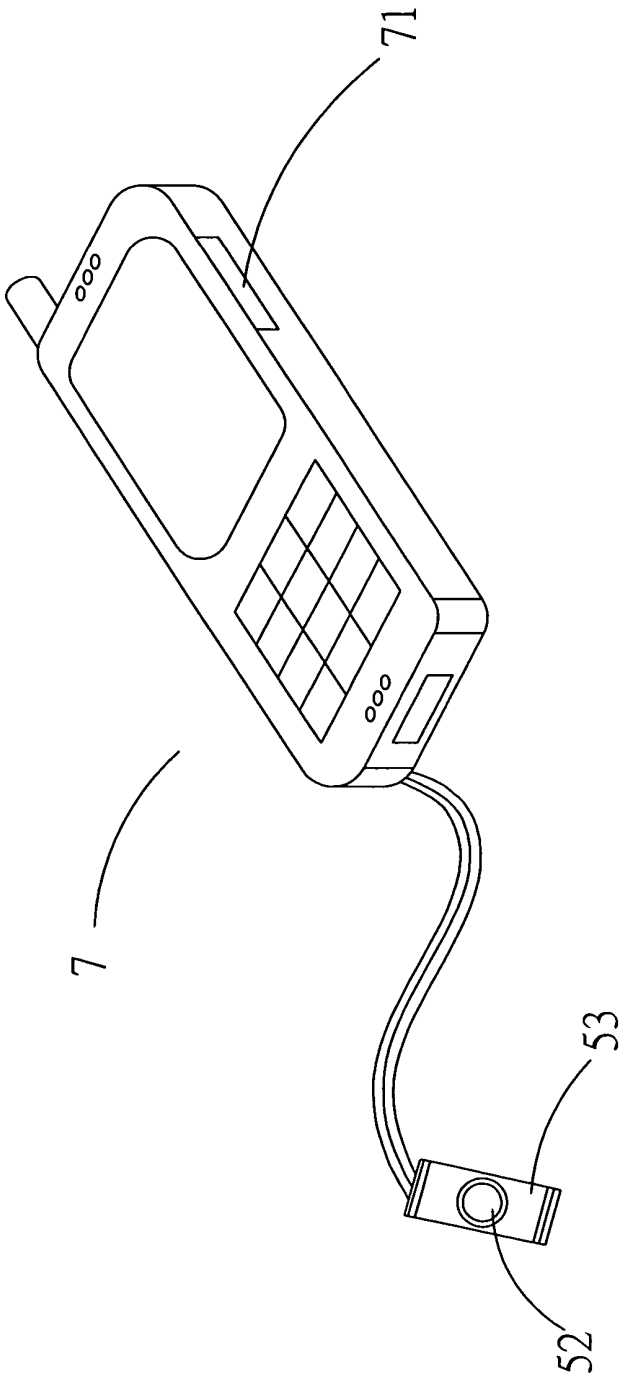


Fig. 5

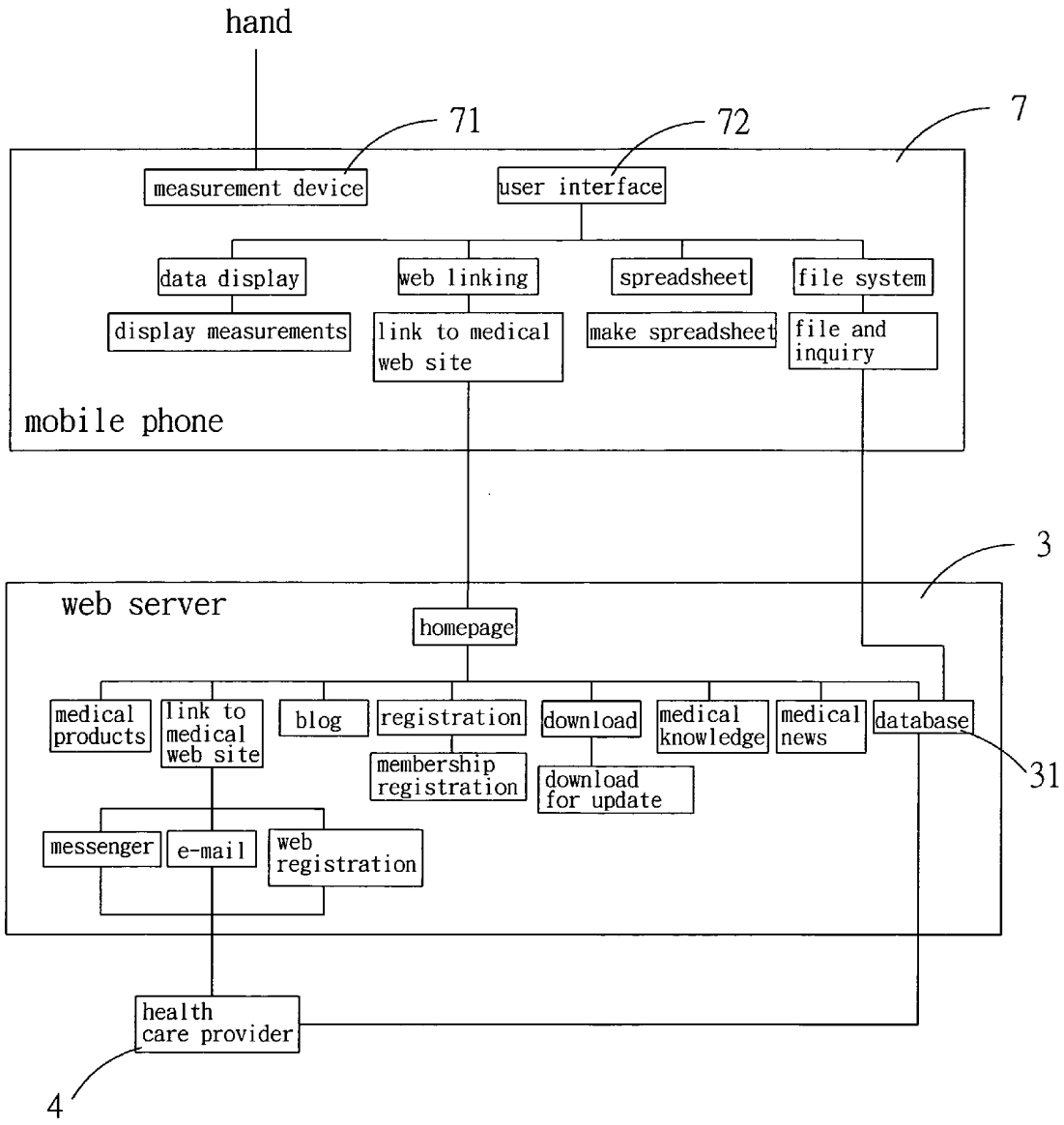

hand
71
72
7
measurement device
user interface
data display
web linking
spreadsheet
file system
display measurements
link to medical web site
make spreadsheet
file and inquiry
mobile phone
3
web server
homepage
medical products
link to medical web site
blog
registration
download
medical knowledge
medical news
database
31
membership registration
download for update
messenger
e-mail
web registration
health care provider
4

Fig. 6

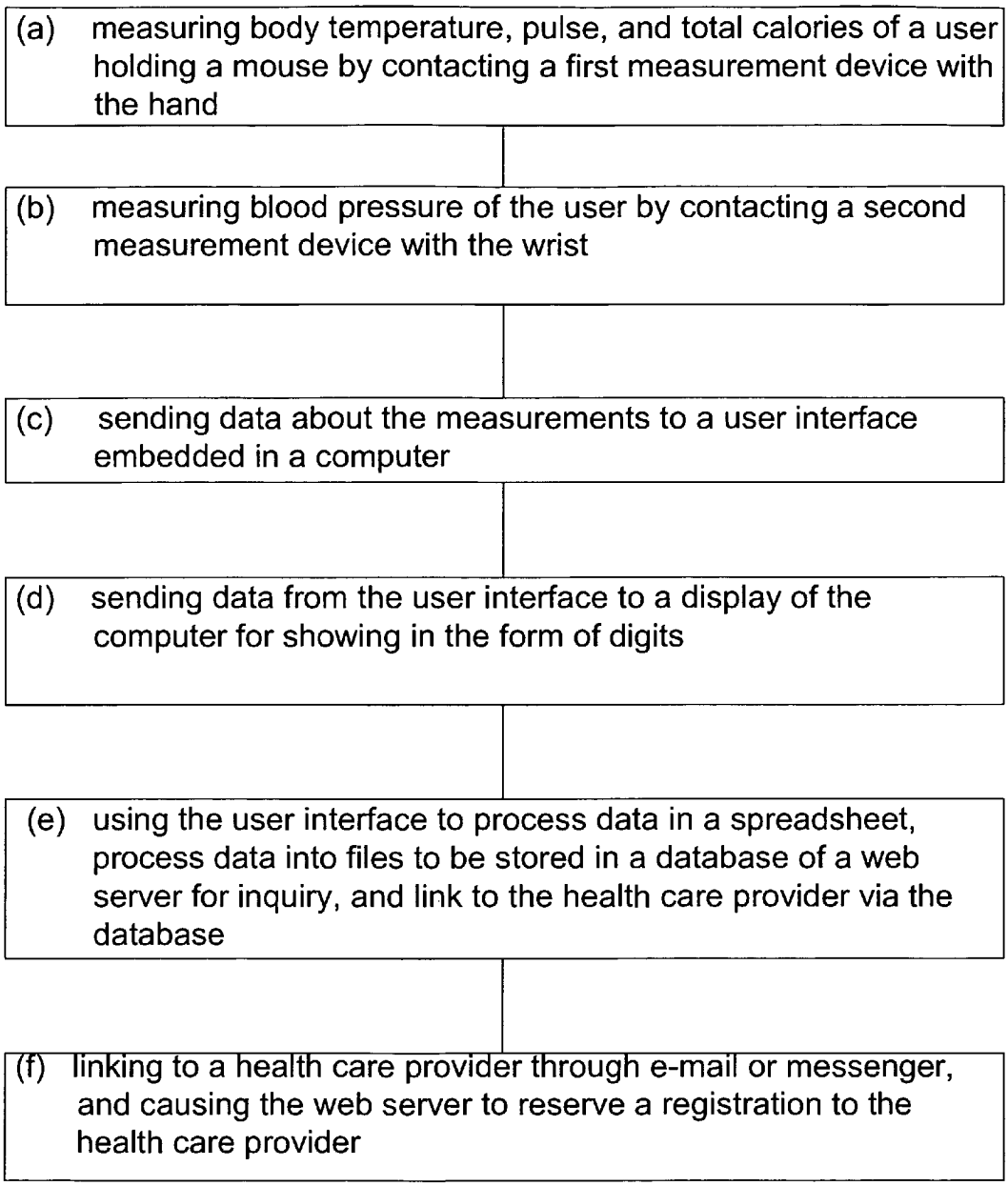

(a) measuring body temperature, pulse, and total calories of a user holding a mouse by contacting a first measurement device with the hand
(b) measuring blood pressure of the user by contacting a second measurement device with the wrist
(c) sending data about the measurements to a user interface embedded in a computer
(d) sending data from the user interface to a display of the computer for showing in the form of digits
(e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database
(f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider

Fig. 7

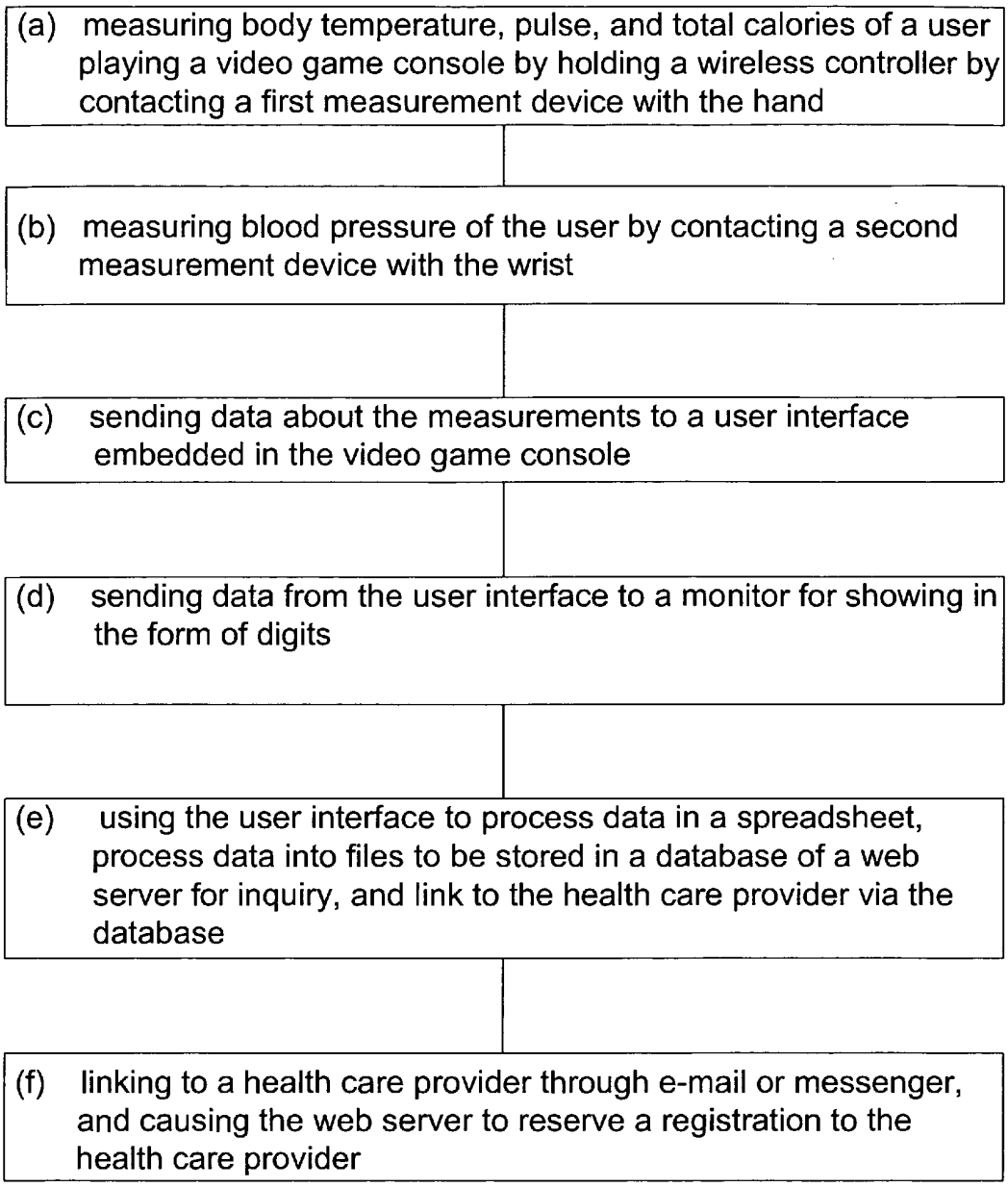

(a) measuring body temperature, pulse, and total calories of a user playing a video game console by holding a wireless controller by contacting a first measurement device with the hand
(b) measuring blood pressure of the user by contacting a second measurement device with the wrist
(c) sending data about the measurements to a user interface embedded in the video game console
(d) sending data from the user interface to a monitor for showing in the form of digits
(e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database
(f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider

Fig. 8

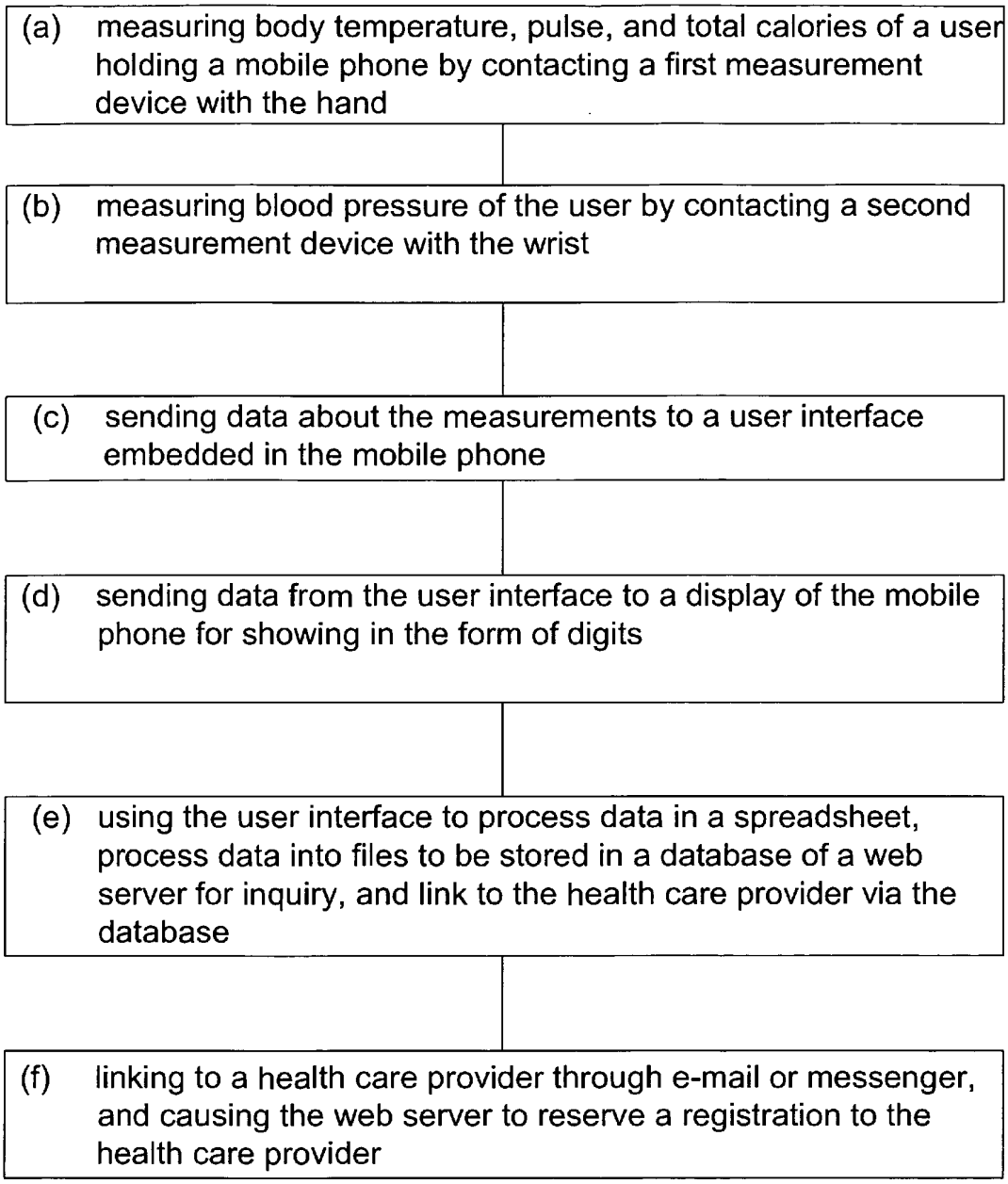

(a) measuring body temperature, pulse, and total calories of a user holding a mobile phone by contacting a first measurement device with the hand
(b) measuring blood pressure of the user by contacting a second measurement device with the wrist
(c) sending data about the measurements to a user interface embedded in the mobile phone
(d) sending data from the user interface to a display of the mobile phone for showing in the form of digits
(e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database
(f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider

Fig. 9

SYSTEM FOR MEASURING AND DISPLAYING VITAL SIGNS AND METHOD THEREFOR

BACKGROUND OF THE INVENTION

[0001] 1. Field of Invention

[0002] The invention relates to the measurement of vital signs and more particularly to a system for measuring and displaying vital signs including body temperature, pulse, blood pressure, and total calories and a method therefor.

[0003] 2. Description of Related Art

[0004] It is typical for a person to go to a health care provider (e.g., hospital) to take a physical examination. However, taking a physical examination is a time consuming thing as viewed by some people. Further, some people may desire to know only a few things about his or her health rather than going to a hospital to take a complete physical examination. Thus, it is desirable to provide a simple system which takes advantage of one or more conventional devices for measuring and displaying vital signs and a method associated therewith.

SUMMARY OF THE INVENTION

[0005] It is therefore one object of the invention to provide a system for measuring and displaying vital signs including body temperature, pulse, blood pressure, and total calories of a person wherein the system takes advantage of one or more conventional devices (e.g., a computer and a mouse and wrist band assembly, a video game console (e.g., "Wii") and a wireless controller (e.g., "Wii" remote), or a mobile phone) being used or played by the person.

[0006] It is another object of the invention to provide a method for measuring and displaying vital signs including body temperature, pulse, blood pressure, and total calories of a person wherein the method is performed on a system which takes advantage of one or more conventional devices (e.g., a computer and a mouse and wrist band assembly, a video game console (e.g., "Wii") and a wireless controller (e.g., "Wii" remote), or a mobile phone) being used or played by the person.

[0007] The above and other objects, features and advantages of the invention will become apparent from the following detailed description taken with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. **1** is a perspective view of a first preferred embodiment of the invention incorporating a mouse and wrist band assembly and a personal computer;

[0009] FIG. **2** is a block diagram of the first preferred embodiment of the invention;

[0010] FIG. **3** is a perspective view of a second preferred embodiment of the invention incorporating a video game console (e.g., "Wii") and a remote controller (e.g., "Wii" remote);

[0011] FIG. **4** is a block diagram of the second preferred embodiment of the invention;

[0012] FIG. **5** is a perspective view of a third preferred embodiment of the invention incorporating a mobile phone;

[0013] FIG. **6** is a block diagram of the third preferred embodiment of the invention;

[0014] FIG. **7** is a flowchart depicting a process for measuring and displaying vital signs according to the first preferred embodiment of the invention;

[0015] FIG. **8** is a flowchart depicting a process for measuring and displaying vital signs according to the second preferred embodiment of the invention; and

[0016] FIG. **9** is a flowchart depicting a process for measuring and displaying vital signs according to the third preferred embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0017] Referring to FIGS. **1** and **2**, a system for measuring and displaying vital signs in accordance with a first preferred embodiment of the invention is shown. The system comprises a mouse **1** including a first measurement device **11** formed thereon, and an inflatable wrist band **13** including a second measurement device (e.g., sphygmomanometer) **12** formed therein. The wrist band **13** is mounted on a mouse pad (not numbered) with the mouse **1** placed thereon.

[0018] The system further comprises a health care provider (e.g., hospital) **4**; a personal computer **2** including a display (not numbered) and an embedded user interface **21**; and a web server **3** including a database **31** for user inquiry and linked to the health care provider **4** for providing data thereto. The web server **3** is further adapted to provide information about medical products, medical knowledge, and medical news, provide links to the health care provider **4** through e-mail or messenger, provide a web based reserved registration to the health care provider **4**, provide a blog for discussion, provide membership registration, and download programs for update.

[0019] In operation, the wrist of a user is wrapped around by the wrist band **13** with the second measurement device **12** being in contact with the wrist. Hence, blood pressure of the user is measured by the second measurement device **12**. Further, the hand holding the mouse **1** contacts the first measurement device **11**. Hence, body temperature, pulse, and total calories of the user are measured by the first measurement device **11**. Furthermore, data about the measurements is sent to the user interface **21** prior to sending to the display of the computer **2** for showing in the form of digits. Moreover, the user interface **21** is adapted to process data about the measured vital signs in a spreadsheet, process data into files to be stored in the database **31**, and link to the health care provider **4** via the database **31**.

[0020] Referring to FIGS. **3** and **4**, a system according to a second preferred embodiment of the invention is shown. The system comprises a video game console (e.g., "Wii") **6**, a wireless controller (e.g., "Wii" remote) **5** for controlling the video game console **6** and including a first measurement device **51** formed on one side edge, and an inflatable wrist band **53** including a second measurement device (e.g., sphygmomanometer) **52** formed therein. The second measurement device **52** is electrically connected to the circuitry of the wireless controller **5** via a cord.

[0021] The system further comprises a health care provider (e.g., hospital) **4**, a monitor (not numbered), a user interface **61** embedded in the video game console **6**, and a web server **3** including a database **31** for user inquiry and linked to the health care provider **4** for providing data thereto. The web server **3** is further adapted to provide information about medical products, medical knowledge, and medical news, provide links to the health care provider **4** through e-mail or messenger, provide a web based reserved registration to the health care provider **4**, provide a blog for discussion, provide membership registration, and download programs for update.

[0022] In operation, the wrist of a user is wrapped around by the wrist band **53** with the second measurement device **52** being in contact with the wrist. Hence, blood pressure of the user is measured by the second measurement device **52**. Further, the hand holding the wireless controller **5** contacts the first measurement device **51**. Hence, body temperature, pulse, and total calories of the user are measured by the first measurement device **51** while the user is playing a video game by

operating the wireless controller **5** with respect to the video game console **6**. Furthermore, data about the measurements is sent to the user interface **61** prior to sending to the monitor for showing in the form of digits. Moreover, the user interface **61** is adapted to process data about the measured vital signs in a spreadsheet, process data into files to be stored in the database **31**, and link to the health care provider **4** via the database **31**.

[0023] Referring to FIGS. **5** and **6**, a system according to a third preferred embodiment of the invention is shown. The system comprises a mobile phone **7** including a first measurement device **71** formed on one side, and an inflatable wrist band **53** including a second measurement device (e.g., sphygmomanometer) **52** formed therein. The second measurement device **52** is electrically connected to the circuitry of the mobile phone **7** via a cord.

[0024] The system further comprises a health care provider (e.g., hospital) **4**, a user interface **72** embedded in the mobile phone **7**, and a web server **3** including a database **31** for user inquiry and linked to the health care provider **4** for providing data thereto. The web server **3** is further adapted to provide information about medical products, medical knowledge, and medical news, provide links to the health care provider **4** through e-mail or messenger, provide a web based reserved registration to the health care provider **4**, provide a blog for discussion, provide membership registration, and download programs for update.

[0025] In operation, the wrist of a user is wrapped around by the wrist band **53** with the second measurement device **52** being in contact with the wrist. Hence, blood pressure of the user is measured by the second measurement device **52**. Further, the hand holding the mobile phone **7** contacts the first measurement device **71**. Hence, body temperature, pulse, and total calories of the user are measured by the first measurement device **71** while the user is making a telephone conversation by means of the mobile phone **7**. Furthermore, data about the measurements is sent to the user interface **72** prior to sending to the display of the mobile phone **7** for showing in the form of digits. Moreover, the user interface **72** is adapted to process data about the measured vital signs in a spreadsheet, process data into files to be stored in the database **31**, and link to the health care provider **4** via the database **31**.

[0026] Referring to FIG. **7**, a flowchart depicting a process for measuring and displaying vital signs in association with the system described in the first preferred embodiment of the invention is illustrated. The process comprises (a) measuring body temperature, pulse, and total calories of a user holding a mouse by contacting a first measurement device with the hand; (b) measuring blood pressure of the user by contacting a second measurement device with the wrist; (c) sending data about the measurements to a user interface embedded in a computer; (d) sending data from the user interface to a display of the computer for showing in the form of digital representation; (e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database; (f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider.

[0027] Referring to FIG. **8**, a flowchart depicting a process for measuring and displaying vital signs in association with the system described in the second preferred embodiment of the invention is illustrated. The process comprises (a) measuring body temperature, pulse, and total calories of a user playing a video game console by holding a wireless controller by contacting a first measurement device with the hand; (b) measuring blood pressure of the user by contacting a second measurement device with the wrist; (c) sending data about the measurements to a user interface embedded in the video game console; (d) sending data from the user interface to a monitor for showing in the form of digital representation; (e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database; (f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider.

[0028] Referring to FIG. **9**, a flowchart depicting a process for measuring and displaying vital signs in association with the system described in the third preferred embodiment of the invention is illustrated. The process comprises (a) measuring body temperature, pulse, and total calories of a user holding a mobile phone by contacting a first measurement device with the hand; (b) measuring blood pressure of the user by contacting a second measurement device with the wrist; (c) sending data about the measurements to a user interface embedded in the mobile phone; (d) sending data from the user interface to a display of the mobile phone for showing in the form of digital representation; (e) using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server for inquiry, and link to the health care provider via the database; (f) linking to a health care provider through e-mail or messenger, and causing the web server to reserve a registration to the health care provider.

[0029] While the invention herein disclosed has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

What is claimed is:

1. A system comprising:

a band wrapped around the wrist of a person and including a first measurement member being in contact with the wrist for measuring blood pressure of the person;

a device electrically connected to the band and including a second measurement member being in contact with the hand for measuring body temperature, pulse, and total calories of the person, a user interface, and a display;

a health care provider; and

a web server including a database;

wherein data about the measurements is sent to the user interface prior to sending to the display for showing in the form of digital representation.

2. The system of claim **1**, wherein the user interface is adapted to process data about the measurements in a spreadsheet, process data about the measurements into files to be stored in the database, and link to the health care provider via the database.

3. The system of claim **1**, wherein the device includes a mouse and a computer, and wherein the user interface is embedded in the computer and the display is a monitor of the computer.

4. The system of claim **1**, wherein the device includes a video game console and a wireless controller, and wherein the user interface is embedded in the video game console and the display is a display of the wireless controller.

5. The system of claim **1**, wherein the device includes a mobile phone, and wherein the user interface is embedded in the mobile phone and the display is a display of the mobile phone.

6. A method comprising:

measuring body temperature, pulse, and total calories of a person holding a device by contacting a first measurement member with the hand;

measuring blood pressure of the person by contacting a second measurement member with the wrist;

sending data about the measurements to a user interface embedded in the device;

sending data from the user interface to a display of the device for showing in the form of digital representation;

using the user interface to process data in a spreadsheet, process data into files to be stored in a database of a web server, and link to a health care provider via the database;

linking to the health care provider through e-mail or messenger; and

causing the web server to reserve a registration to the health care provider.

7. The method of claim **6**, wherein the device includes a mouse and a computer, and wherein the user interface is embedded in the computer and the display is a monitor of the computer.

8. The method of claim **6**, wherein the device includes a video game console and a wireless controller, and wherein the user interface is embedded in the video game console and the display is a display of the wireless controller.

9. The method of claim **6**, wherein the device includes a mobile phone, and wherein the user interface is embedded in the mobile phone and the display is a display of the mobile phone.

* * * * *

专利名称(译)	用于测量和显示生命体征的系统及其方法		
公开(公告)号	US20080189291A1	公开(公告)日	2008-08-07
申请号	US11/700960	申请日	2007-02-01
[标]发明人	HSU KENT T J		
发明人	HSU, KENT T.J.		
IPC分类号	G06F7/00 A61B5/00		
CPC分类号	A61B5/681 A61B5/0002		
外部链接	Espacenet USPTO		

摘要(译)

提供了一种用于测量和显示生命体征的系统和方法。乐队缠绕在一个人的手腕上。该带包括用于测量人的血压的第一测量装置。电连接到带的装置包括第二测量装置，用于通过接触来测量人的体温，脉搏和总卡路里。在发送到与设备相关联的显示器以进行显示之前，将关于测量的数据发送到嵌入在设备中的用户界面。用户界面适于处理关于电子表格中的测量的数据，将关于测量的数据处理成要存储在web服务器的数据库中的文件，以及经由数据库链接到医疗保健提供者。该设备被实现为计算机和鼠标，视频游戏控制台和无线控制器，或移动电话。